UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/543,207	04/05/2000	Kiyoshi Maruyama	Y0999-470	7275

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EXAMINER
MIRZA, ADNAN M

ART UNIT	PAPER NUMBER
2141	8

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/543,207	MARUYAMA ET AL.
	Examiner	Art Unit
	Adnan M Mirza	2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _25 August 2003_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-33_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-33_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

2.   Claim 1 is rejected under 35 U.S.C. 102(e) as being unpatentable by Vaid et al (U.S.

6,502,131).

As per claim 1 Vaid disclosed a system for controlling and managing Internet server farm traffic

through a plurality of servers, the server farm traffic arriving at a server farm as inbound traffic

organized by customer (i) and traffic type (j) and leaving the server farm as outbound traffic the

system being operable to control and manage the outbound traffic in accordance with outbound

bandwidth usage-based service level agreements of form (Bmin,Bmax) (col. 10, lines 17-26), the

system comprising: means for collecting the admitted rate (Ra) of inbound traffic for each

customer traffic type (i,j) (col. 3, lines 29-31); means for collecting the rejected rate (Rr) of

inbound traffic for each customer traffic type (i,j) (col. 4, lines 49-61); means for collecting the

outbound traffic (B) for each customer traffic type (i,j); means for computing an expected

bandwidth usage (col. 6, lines 27-33) (b) per TCP connection request for each customer traffic

type (i,j); means for computing the target rate (Rt) for each customer traffic type (i,j) that

supports the outbound bandwidth usage-based service level agreements of form (Bmin,Bmax);

limiter means for admitting inbound traffic based on the target rate (Rt) and for tracking the

volume of admitted inbound traffic (Ra) and the volume of rejected inbound traffic (Rr) for each

customer traffic type (i,j) (col. 7, lines 15-23); means for relaying the target rates (Rt) for

inbound traffic to the limiter means; and means for dispatching the admitted inbound traffic (Ra)

to the servers (col. 17, lines 4-11)

Claim Rejections - 35 USC § 103

1.   Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colby et al

(U.S. 6,006,264) and further in view of Vaid et al (U.S. 6,520,131).

As per claims 1,16,25,29 Colby disclosed a system for controlling and managing Internet server

farm traffic through a plurality of servers, the server farm traffic arriving at a server farm as

inbound traffic organized by customer (i) and traffic type (j) and leaving the server farm as

outbound traffic (col. 8, lines 35-45), the system being operable to control and manage the

outbound traffic in accordance with outbound bandwidth usage-based service level agreements

of form (Bmin,Bmax) (col. 9, lines 9-20), the system comprising: means for collecting the

admitted rate (Ra) of inbound traffic for each customer traffic type (i,j) (col. 5, lines 52-60);

means for collecting the rejected rate (Rr) of inbound traffic for each customer traffic type (i,j)

(col. 10, lines 60-63); means for collecting the outbound traffic (B) for each customer traffic type

(i,j) (col. 5, lines 61-67 & col. 6, lines 1-6);

However Colby failed to disclose means for computing an expected bandwidth usage (b) per

TCP connection request for each customer traffic type (i,j); means for computing the target rate

(Rt) for each customer traffic type (i,j) that supports the outbound bandwidth usage-based service

level agreements of form (Bmin,Bmax); limiter means for admitting inbound traffic based on the

target rate (Rt) and for tracking the volume of admitted inbound traffic (Ra) and the volume of

rejected inbound traffic (Rr) for each customer traffic type (i,j); means for relaying the target

rates (Rt) for inbound traffic to the limiter means; and means for dispatching the admitted

inbound traffic (Ra) to the servers.

In the same filed of endeavor Vaid disclosed policies can be specified to control traffic flows in

terms of overall bandwidth guarantees, bandwidth limits, priority of service, how individual

sessions within a class are serviced or admitted, and other aspects (col. 17, lines 4-8). Bandwidth

usually refers to maximum available bit rate for a specific application. In a specific embodiment,

synchronous, interactive, and real-time applications, which are bandwidth-sensitive, can require

minimum bandwidth guarantees, and can require sustained and burst scale bit rates (col. 5, lines

31-36). The Fair Module generally implements traffic control and manages bandwidth of

incoming and outgoing information to and from the network or link. Flow Analysis and

Intelligent Regulation ("FAIR") implements traffic control based on a combination of flow

control and queuing algorithms. FAIR's objective provides inbound and outbound traffic control

based on combination of flow control and queuing algorithms. FAIR's objective provides

inbound and outbound traffic management for meaningful time intervals, reducing the load on

packet classifiers and packet schedulers. The FAIR module controls the incoming and outgoing

information to and from the network (col. 13, lines 59-67 & col. 14, lines 1-2).

It would have been obvious to one having ordinary skill in the art at the time the invention was

made to have incorporated means for computing an expected bandwidth usage (b) per TCP

connection request for each customer traffic type (i,j); means for computing the target rate (Rt)

for each customer traffic type (i,j) that supports the outbound bandwidth usage-based service

level agreements of form (Bmin,Bmax); limiter means for admitting inbound traffic based on the

target rate (Rt) and for tracking the volume of admitted inbound traffic (Ra) and the volume of

rejected inbound traffic (Rr) for each customer traffic type (i,j); means for relaying the target

rates (Rt) for inbound traffic to the limiter means; and means for dispatching the admitted

inbound traffic (Ra) to the servers to make the use of wide area networking more efficient and

reduce the latency in terms of traffic over the Internet.

2.   As per claims 2,19,26 Vaid disclosed wherein the means for collecting the admitted rate

(Ra) and the rejected rate (Rr) of inbound traffic comprises an inbound traffic scheduler device

and an inbound traffic monitor, the inbound traffic monitor being operable to observe the

admitted rate (Ra) and the rejected rate (Rr) of inbound traffic and relay the admitted rate (Ra)

and rejected rate (Rr) to the inbound traffic scheduler device (col. 13, lines 59-67).

3.   As per claims 3,18 Vaid disclosed wherein the inbound traffic monitor is associated with

the dispatching means (col. 13, lines 35-42).

4.   As per claims 4-7,20-21,27,29 Vaid disclosed wherein the inbound traffic monitor is

associated with the dispatching means (col. 20, lines 58-65 & col.13, lines 59-67).

5.   As per claims 8-10,30 Vaid disclosed further comprising means for observing the average

resource usage (c) of each server consumed for each consumer traffic type (i,j) (col. 5, lines 1-

14).

6.   As per claims 11,23 Vaid disclosed wherein the dispatching means comprises at least one

inbound traffic limiter, a high-speed LAN and a plurality of dispatchers, the limiter means being

associated with the inbound traffic limiter, each of the dispatchers being associated with at least

one of the servers (col. 7, liens 12-23).

7.   As per claims 12-15,24 Vaid disclosed wherein the dispatching means comprises a high-

speed LAN and a plurality of dispatchers (col. 12, lines 11-22), the limiter means and monitor

means being associated with each of the dispatchers, each of the dispatchers being associated

with at least one of the servers (col. 11, lines 42-48).

8.   As per claims 17,32-33 Vaid disclosed wherein the inbound traffic scheduler is operable

to compute target rates (Rt) for all customer traffic type (i,j) to meet with the service level

agreements of form (Bmin, Bmax) on the outbound bandwidth usage, and is operable to support

both bandwidth borrowing and bandwidth not-borrowing modes of operations (col. 3, lines 62-
67, col. 4, lines 1-14).

9.   As per claims 22,31 Vaid disclosed wherein the inbound traffic dispatching network is
operable to balance the inbound traffic among the servers (col. 12, lines 12-32).

10.   As per claim 28 Colby disclosed wherein the step of collecting the bound (Rbound(i,j))
on the target rate (Rt(i,j)) comprises the steps of receiving the bound (Rbound(i,j)) from a server
resource manager (col. 8, lines 37-55).

Applicant's arguments are as follows:

11.   Applicant argued that prior art did not disclose limiting inbound traffic to control
outbound bandwidth based on an estimate.

As to applicant's argument Vaid disclosed the Fair Module generally implements traffic control
and manages bandwidth of incoming and outgoing information to and from the network or link.
Flow Analysis and Intelligent Regulation ("FAIR") implements traffic control based on a
combination of flow control and queuing algorithms. FAIR's objective provides inbound and
outbound traffic control based on combination of flow control and queuing algorithms. FAIR's
objective provides inbound and outbound traffic management for meaningful time intervals,
reducing the load on packet classifiers and packet schedulers. The FAIR module controls the
incoming and outgoing information to and from the network (col. 13, lines 63-67 & col. 14, lines

1-2). One ordinary skill in the art at the time of the invention can easily interpreted the Fair

module implements traffic control and manages bandwidth of incoming and outgoing

information to and form the network or link as limiting inbound traffic to control outbound

bandwidth based on an estimate.

Conclusion

12.   Any inquiry concerning this communication or earlier communication from the examiner

should be directed to Adnan Mirza whose telephone number is (703)-305-4633.

13.   The examiner can normally be reached on Monday to Friday during normal business

hours.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Wiley can be reached on (703)-308-5221. The fax for this group is (703)-746-

7239.

14.   The fax phone numbers for the organization where this application or proceeding is

assigned are as follows:

(703)-746-7239 (For Status Inquiries, Informal or Draft Communications, please label

"PROPOSED" or "DRAFT");

(703)-746-7239 (For Official Communications Intended for entry, please mark "EXPEDITED

PROCEDURE"),

(703)-746-7238 (For After Final Communications).

15.   Any Inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703)-305-3900.

Any response to a final action should be mailed to:

BOX AF

Commissioner of Patents and Trademarks Washington, D.C.20231

Or faxed to:

Hand-delivered responses should be brought to 4th Floor Receptionist, Crystal Park II,

2021 Crystal Drive, Arlington, VA 22202.

Adnan Mirza

Examiner

RUPAL DHARIA
SUPERVISORY PATENT EXAMINER